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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/539,902	ALSAFADI ET AL.	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 05 May 2009.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-4, 6-8 and 10-15 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-4,6-8 and 10-15 is/are rejected.
- 7) Claim(s) 6 and 8 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 05 May 2009 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____.
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date _____.	6) <input type="checkbox"/> Other: _____.

DETAILED ACTION

This action is in response to the filing on May 5, 2009. After the amendment, Claims 1-4, 6-8 and 10-15 are in the application with claims 1 and 12 being independent.

Oath/Declaration

The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:
It does not identify the citizenship of each inventor.

A supplemental oath or declaration is required under 37 CFR 1.67. The new oath or declaration must properly identify the application of which it is to form a part, preferably by application number and filing date in the body of the oath or declaration. See MPEP §§ 602.01 and 602.02. Although the applicants Remarks stated that a replacement Oath/Declaration was submitted with the amendment, it was not received at the office.

Claim Objections

Claims 6 and 8 are objected to because of the following informalities:

In **claims 6 and 8**, when more than one behavior template is associated with a defined behavior, there is no mention of how to select a template for supplying the low-level language statements. See the rejection of claim 13 under 35 USC 112 2nd paragraph for further detail.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 12 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 12 recites “means for transforming, in the transforming engine (26), said behaviors included in accordance with said defined rules to yield a third set of robotic commands (30) for directly controlling said robots (41).”

Claim 13 recites “means for searching said plurality of behavioral templates (22) for each selected behavior to locate a behavior template matching said selected behavior.” In paragraph 23, of the printed publication of the application, the spec teaches that the RBL templates exist in a many-to-one relationship with the RSL commands. The specification does not teach how to select one behavioral template from the many to apply for a particular behavior.

Claim 12 element “means for transforming, in the transforming engine (26), said behaviors included in accordance with said defined rules to yield a third set of robotic commands(30) for directly controlling said robots(41)” is a means (or step) plus function limitation that invokes 35 U.S.C. 112, sixth paragraph. However, the written description fails to disclose the corresponding structure, material, or acts for the claimed function.

Claim 13 expands on claim 12 however, claim **13** element “means for searching said

plurality of behavioral templates (22) for each selected behavior to locate a behavioral template matching said selected behavior;” is a means (or step) plus function limitation that invokes 35 U.S.C. 112, sixth paragraph. However, the written description fails to disclose the corresponding structure, material, or acts for the claimed function.

Biomedino, 490 F3rd. 946 at 953. The detail about this step is provided in paragraphs 36 and 37 (especially sentences 2 and 3) of the printed publication of the application. However, these paragraphs merely recite that a search is made not how a search is made. In applicants’ remarks, paragraph 23 is referenced illustrating “smile” as being performed as “instructing the robot to move its cheeks up and down rapidly”. However, in paragraph 22 the rules for “smile” are listed as “include a first rule for instructing the robot to move the outer portions of his mouth upward and a second rule instructing the robot to display all of his teeth”. The specification does not teach how the search decides between these rules. Further the cited portion does not recite structure but merely provides an example of the function being used.

Applicant is required to:

- (a) Amend the claim so that the claim limitation will no longer be a means (or step) plus function limitation under 35 U.S.C. 112, sixth paragraph; or
- (b) Amend the written description of the specification such that it expressly recites what structure, material, or acts perform the claimed function without introducing any new matter (35 U.S.C. 132(a)).

If applicant is of the opinion that the written description of the specification already implicitly or inherently discloses the corresponding structure, material, or acts so that one of ordinary skill in the art would recognize what structure, material, or acts perform the claimed function, applicant is required to clarify the record by either:

- (a) Amending the written description of the specification such that it expressly recites the corresponding structure, material, or acts for performing the claimed function and clearly links or associates the structure, material, or acts to the claimed function, without introducing any new matter (35 U.S.C. 132(a)); or

(b) Stating on the record what the corresponding structure, material, or acts, which are implicitly or inherently set forth in the written description of the specification, perform the claimed function. For more information, see 37 CFR 1.75(d) and MPEP §§ 608.01(o) and 2181.

In conjunction with confirming that there are no other rejections under this section, the examiner states that she is assuming that the following “means for” phrases are defined as noted;

“Means for supplying a first set of programming statements” – Figs. 1 and 3 and paragraphs 20, 21, 30 and 31.

“Means for supplying a second set of programming statements” – Figs. 1 and 3 and paragraphs 24 and 25.

“Means for sequentially selecting said behaviors from said first set...” – paragraph 37 first sentence.

“Means for applying said matching behavioral templates ...” - paragraph 37 last sentence.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims **1-4, 6-8 and 12-15** are rejected under 35 U.S.C. 103(a) as being unpatentable over PCT Printed Publication WO 02/29715 to Kent Ridge (Kent Ridge). Kent Ridge uses mark up language to program the behavior of synthetic creatures which include robots.

Regarding independent **claims 1 and 12** which are method and systems claims that correspond to each other, “**A computer-implemented method for controlling a robot (41), the method comprising the steps of:** – On page 1 lines 18-21, Kent Ridge identifies the synthetic characters as graphical or digital characters, toys, interactive toys, robots, and industrial robots

(a) supplying a first set of programming statements (20) defining behaviors to be performed by said robot (41) as a first input to a transformation engine (26), said first set of programming statements are represented as at least one graphic icon representing said behavior; - - Referencing Fig. 1 and page 10 lines 8-10, a child non-programmer creates an SBML program that is validated by the Validating XML parser. – yielding a SBML object tree. While Kent Ridge explains the invention in terms of a script and a high-level language, on page 16, lines 14-17 it states:

“Although a simple high-level markup language, it may be even simpler for children and non-programmers to use a visual tool for programming. Such a visual tool can provide buttons, icons, and menu items for creating a story. The visual tool can then generate the script as output.”

Showing that the use of icons was included in Kent Ridge.

(b) supplying a second set of programming statements (22) organized as a plurality of behavioral templates defining rules for interpreting said behaviors as a second input to said transformation engine (26); and

(c) transforming, in said transformation engine (26), said behaviors in accordance with said defined rules to yield a third set of robotic programming

statements (30) for directly controlling said robot (41). – In Fig. 1, the SBML object tree is processed by one of the platform code generators. Since Kent Ridge has already stated that the development is in extended XML, it is logical that these code generators comprise templates and transform engines to work on the templates to generate the programming code. See Page 16, line 29-34 and Fig. 5 which shows how the template for the Alice Python code generator would be structured.

Regarding **claim 2, The method of Claim 1 wherein said first set of programming statements (20) are written in a first high-level programming language.** - At page 4, line 15-17 – Kent Ridge identifies the invention as a programming means for specifying behavior of synthetic creatures in a high-level markup language. This is reinforced at page 16 lines 14-15.

Regarding **claim 3, The method of Claim 1, wherein said second set of programming statements (22) are written in a second high-level programming language.** – As shown in Fig. 5, the second set of programming statements are written in a second high-level language.

Regarding **claims 4, The method of Claim 2, wherein said first set of programming statements are in the form of an extensible markup language (XML) and the second set of programming statements are in the form of an extensible stylesheet language (XSL,).** - At page 15, line 40, Kent Ridge states that the preferred

implementation of its method is in XML using a Document Type Definition as shown in Table 2. Col. 1 line 57 to col. 2 line 13 of U.S. Patent No. 6,589,291 to Boag et al. is referenced to show that stylesheets and an extensible stylesheet language was well known at the time of the invention.

Regarding **claim 6, The method of Claim 1, wherein one of said defined behaviors from said first set of programming statements (20) is associated with one or more of said plurality of behavioral templates.** – See Fig. 1 where there are 3 code generators each having at least one behavior template for each behavior of the first set of programming statements.

Regarding **claim 7, The method of Claim 1, wherein said third set of robotic programming statements (30) are written in a low-level robotic hardware language directly executable by said robot (41).** – See page 16 lines 36-40, where the code generators are used to generate low-level code for the particular implementation

Regarding **claim 10, The method of Claim 1, wherein said first set of programming statements (20) collectively comprise a robotic presentation (40) to be performed by said robot (41).** – See page 11, lines 14-16 where the language is listed as being for creating, and replaying stories in disparate mediums.

Regarding **claim 11, The method of Claim 10, further comprising the step of combining said at least a portion of said third set of robotic commands (30) with at least one of an audio and/or a video multi-media stream for use in said robotic presentation (40).** – See page 9, line 40 to page 10 line 6, where the mark up language implementation of the method may include in addition to text, graphics, audio, video and any other multimedia information.

Claims 8 and 13-15 are rejected for incorporating the above errors from the parent claims by dependency.

Response to Arguments

Drawings

The replacement drawings were received on May 5, 2009. These drawings are acceptable.

The rejections to claims 9, 11 and 14-15 have been addressed, these rejections have been withdrawn.

Specification

The disclosure is objected to because of the following informalities:

In the first set of directions to replace paragraphs on page 2 of the amendments, the directions are incorrect. The paragraph in question runs from page 4, line 32 to page 5 line 10.

The remainder of the objections to the specification have been addressed and the objections have been withdrawn.

Appropriate correction is required.

Claim Objections and Rejections

The objection to claim 3 has been withdrawn.

The objection to claim 6 and rejection of claim 13 under 35 USC 112 2nd paragraph are sustained for the reasons more fully articulated in the body of the action.

Applicant's arguments filed May 5, 2009 have been fully considered but they are not persuasive. Applicant states that "Ridge fails to provide any disclosure regarding obtaining a first set of programming statements form a graphic representation of the behavior or any structure that would translate the first set of program statements obtained from icon information into story presentation that may then be translated using the Document Type Definition Table. The Examiner has pointed to the paragraph on page 16 that suggests an iconic interface for creating the story and a way to transform that story to a form translatable by the Document Type Definition Table.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent No. 4,827,404 to Barstow et al. – note especially the graphic editor and the sequence through 22-26-32-34; U.S. Patent No. 5,576,946 to Bender et al. for icon based process design; U.S. Patent No. 5,724,074 to Chainani et al. for graphical programming of toys and U.S. Patent No. 6,456,436 for icon-based Software for controlling toys.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LIN B. OLSEN whose telephone number is (571)272-9754. The examiner can normally be reached on Mon - Fri, 8:30 -5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas G. Black can be reached on 571-272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lin B Olsen/
Examiner, Art Unit 3661

**/Thomas G. Black/
Supervisory Patent Examiner, Art Unit 3661**